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04/29/2005

Dr. Mark M. Friedman
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EXAMINER

PYZOCHA, MICHAEL J

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,717

Applicant(s)

COHEN, ROY

Examiner

Michael Pyzocha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

1. Claims 28-47 are pending.
2. Amendment filed 04/11/2005 has been received and considered.

Drawings

3. The drawings were received on 02/14/2005. These drawings are acceptable.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 28-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claims 28 and 47 recite the limitations "randomly fragmenting" and "randomly shifting" which deem the claims indefinite because the fragmenting and shifting are done based on a map.

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 28, 30-33, 35-37, 41-42, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulme and further in view of Schneier.

As per claims 28 and 47 Hulme discloses protecting of data by randomly selecting a plurality of random points thereby generating a random map, wherein said selecting is performed by the first user; randomly fragmenting the data into a plurality of fragments based on said map, each said fragment including a portion of the data randomly shifting said fragments thereby encrypting the data into encrypted data, wherein said shifting is based on said map, wherein said shifting disorders the data; and creating a first key based on said map, wherein said first key is operative for decrypting said encrypted data (see pages 159-163).

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Hulme fails to disclose the method being performed on a computer.

However, Schneier teaches encryption being performed on a computer (see page 179).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform Hulme's encryption method in Schneier's computerized environment.

Motivation to do so would have been that hardware encryption is safer.

As per claim 30, the modified Hulme and Schneier system discloses pausing at least one application (see Schneier page 179).

As per claim 31, the modified Hulme and Schneier system discloses the encrypting further includes scrambling the portions of the computerized data within each fragment according to the map (see Hulme pages 159-163).

As per claim 32, the modified Hulme and Schneier system discloses the encrypted data is not readable (see Hulme pages 159-163).

As per claim 35, the modified Hulme and Schneier system discloses the correct order of the fragments can only be determined by the map (see Hulme pages 159-163).

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As per claim 36, the modified Hulme and Schneier system discloses dividing the map into portions and distributing the portions among the fragments (see Hulme pages 159-163).

As per claim 37, the modified Hulme and Schneier system discloses varying the order of the map portions based on time (see Hulme pages 159-163).

As per claim 41, the modified Hulme and Schneier system discloses encrypting a second key to be sent with the first key (see Schneier pages 176-177). Where it would have been obvious at the time of the invention to a person of ordinary skill in the art to use Schneier's teaching of encrypting keys in the encryption system of Hulme and Schneier. Motivation to do so would have been to transport keys.

As per claim 42, the modified Hulme and Schneier system discloses the keys being used in sequential order (see Hulme pages 159-163).

As per claim 33, the modified Hulme and Schneier system discloses scrambling data according to a map (see Schneier page 11). At the time of the invention it would have been obvious to one of ordinary skill in the art to scramble the data before fragmenting it. Motivation to do so would have been to secure the data.

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9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Hulme and Schneier system as applied to claim 28 above, and further in view of Angelo et al (US 5850559).

As per claim 29, the modified Hulme and Schneier system fails to disclose pausing at least one network connection.

However, Angelo et al teaches closing a network connection (see column 2 lines 1-13).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use pause a network connection in the modified Hulme and Schneier system.

Motivation to do so would have been to prevent viruses from entering the system.

10. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Hulme and Schneier as applied to claim 28 above, and further in view of Novaes.

As per claim 34, the modified Hulme and Schneier system fails to disclose generating a map using a fractal based on fractal parameters.

However, Novaes teaches choosing points from a fractal to form a map (see column 7 lines 36-44 where figures 10A-10C are the map).

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At the time of the invention would have been obvious to a person of ordinary skill in the art to use Novaes' method of forming a map to create the map of Hulme and Schneier.

Motivation to do so would have been to create a map from expansions of the fractals (see column 1 lines 11-25).

11. Claims 38-40, 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Hulme and Schneier as applied to claim 28 above and further in view of Sasich et al (U.S. 6,661,904).

As per claim 38, the modified Hulme and Schneier fails to disclose at least portion of the encrypted data is concealed in an image.

However, Sasich et al teaches concealing scrambled data in at least one image (see Sasich et al column 6 lines 25-29).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Sasich et al's to conceal the data of the modified Hulme and Schneier system in an image.

Motivation to do so would have been to electronically transmit data.

As per claims 39-40, the modified Hulme, Schneier, and Sasich et al system discloses the first key includes information about a location for storing at least a portion of the

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computerized data and the first key includes at least a portion of the random map (see Sasich column 6 lines 25-29).

As per claims 43-45, the modified Hulme, Schneier, and Sasich et al system discloses using sequential keys including location information concealed in an image (see Sasich column 6 lines 25-29).

12. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Hulme, Schneier and Sasich et al method as applied to claim 45 above, and further in view of Bocionek et al (U.S. 6,301,360).

As per claim 46, the modified Hulme, Schneier, and Sasich et al method fails to disclose each image is a fractal.

However, Bocionek et al discloses using a fractal to embed data (see column 6 lines 55-67).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Bocionek et al's fractal as the sequential images of the modified Hulme, Schneier, and Sasich et al method.

Motivation to do so would have been the added security of needing to know the parameters of the chaotic function used to create the fractal (see Bocionek et al column 7 lines 10-18).

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Response to Arguments

13. Applicant's arguments filed 4/11/2005 have been fully considered but they are not persuasive. Applicant argues that Hulme only masks the data and it remains in order. However, as in the cited pages Hulme disorders the message by rotating the grille.

14. Applicant also argues unexpected results and long felt need and includes an Affidavit from Andre Szykier.

Regarding the argument about unexpected results the supplied affidavit signed by Andre Szykier fails to point out any difference between the claimed invention and the prior art that result in some differences in properties. The properties given by Mr. Szykier point out properties that any strong encryption scheme would have and therefore fails to show how the claimed invention displays unexpected results.

Regarding the long felt need argument the affidavit fails to show a long felt need for this encryption system. The implementations given by Mr. Szykier have all been fulfilled by other encryption schemes. Also Applicant claims the system is a public key system when the system is actually a private key system because the same map (key) is used for encryption and decryption.

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Response to Affidavit

15. The affidavit under 37 CFR 1.132 filed 02/14/2005 is insufficient to overcome the rejection of claims 28-47 based upon the rejection under Hulme as set forth in the last Office action because: the affidavit is not persuasive (see the response to arguments section above).

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Andrew Caldwell", with a stylized flourish at the end.

**ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER**